Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use	)	ET Docket No. 94-32

To: The Commission

COMMENTS OF THE
UTILITIES TELECOMMUNICATIONS COUNCIL

The Utilities Telecommunications Council (UTC), hereby submits its Comments, pursuant to Section 1.415 of the Commission's Rules, to the Notice of Inquiry (NOI) in ET Docket No. 94-32, FCC 94-97, released May 4, 1994. Through this Inquiry, the Commission seeks information on potential applications for 50 MHz of spectrum that will be transferred immediately from the Federal Government to the private sector, as required by the Budget Reconciliation Act of 1993. The bands identified by the Department of Commerce for immediate reallocation are the 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz bands.

I. BACKGROUND

UTC is the national representative on communications matters for the nation's electric, gas, and water utilities, and natural gas pipelines. UTC's approximately 2,000 members range from small, electric cooperatives and water districts each serving a few thousand customers, to large electric-gas-water utilities which serve millions of customers each. Regardless of their size, all utilities and pipelines depend upon reliable and secure communications facilities to help fulfill their obligations to provide essential services to the public. UTC therefore welcomes the opportunity to comment in this proceeding.

II. UTILITIES REQUIRE A PORTION OF THE REALLOCATED FEDERAL SPECTRUM FOR PRIVATE EMERGING TECHNOLOGIES

Utilities, pipelines, public safety/public service entities and other core industries have a current internal need for private advanced mobile/portable communications capabilities. For example, utilities have a strong need for mobile data communications capabilities that would enable the mobile transmission of schematic diagrams and power switching orders. In addition, energy conservation and control would be greatly enhanced through the implementation of utility mobile meter reading and wireless distribution automation technologies.

While the recent FCC decision allocating spectrum for the development of Personal Communications Services (PCS) will provide adequate spectrum to accommodate carrier-provided emerging technology services, there is a clear and compelling need for a separate allocation of spectrum to accommodate private emerging technology requirements that cannot be met by carrier-provided PCS systems. It is for this reason that UTC supports the comments of the Coalition of Private Users of Emerging Multimedia Technologies ("COPE") that are being filed in this proceeding today.

UTC is one of the founding members of COPE a coalition of associations which collectively represent the vast majority of private land mobile users. On December 23, 1993, COPE filed a "Petition for Rule Making," in which it requested the Commission to initiate a proceeding to allocate spectrum for the development of an "Advanced Private Land Mobile Communications Service." This service would support communications systems designed to meet the unique needs of the private radio user community for advanced wireless imaging and decision processing/remote file access capabilities.

The development of an "Advanced Private Land Mobile Communications Service" as proposed by COPE would significantly advance the ability of utilities to provide reliable, low cost and efficient service, while at the same time implementing

vital energy conservation and environmental programs. Utility-owned and -maintained telecommunications systems allow for efficient day-to-day service and more timely restoration of critical service than could be provided if utilities were forced to rely entirely on telephone common carriers or other third party communications providers. Further, the unique operational aspects of utility service -- critical time delay parameters; transmission of volatile substances; and expansive or remote operating territories -- necessitate the use of internal communications systems.

As an industry, utilities have one of the largest demands for "real time" communications in the nation and these demands are expected to increase dramatically in the near future as utility system operations become more complex. For example, the growth in non-traditional resource options such as non-utility generators, independent power producers and demand side management programs, will elevate the importance of real-time communications in coordinating system operations.

Specifically, utilities are interested in an allocation of spectrum to implement advanced wireless communications systems to meet the following critical energy conservation and management functions:

- Advanced distribution automation (remote monitoring, coordination and operation of distribution and transmission components from centralized locations, including load management, advanced mobile meter reading and system control functions.
- Mobile automated mapping and facilities management.
- Demand side management ("DSM") systems; e.g., managing the consumption of electric power and gas.
- Transmissions to monitor and record pipeline flow and pipeline pressure indicators.
- Real-time monitoring, alerting and control in situations involving handling of hazardous materials.
- Wireless slow scan video monitoring for nuclear plant monitoring

III. DISCUSSION OF SPECIFIC FREQUENCIES

UTC is pleased that the Commission is specifically focusing in this Inquiry on the ability of the Federal spectrum to meet the spectrum requirements raised by COPE.[1/] UTC believes that the initial allocation of Federal spectrum will be of value in meeting some of the private emerging technology requirements.

[1/] Notice of Inquiry, n.21.

Of the three bands recommended for immediate reallocation, UTC believes that the 2390-2400 MHz band would best meet the needs of private system licensees such as utilities. The band is available in Region 2 for fixed, mobile and radiolocation use, and would thus be available for the types of operations proposed in COPE's Petition for Rule Making. Similarly, utility applications and other operations proposed in COPE's petition would comply with the restrictions recommended by the Department of Commerce; viz., (1) the band should not be used for airborne or space-to-Earth links, and (2) operations should be restricted in the vicinity of the planetary research radar facility at Arecibo, Puerto Rico.

The "Preliminary Spectrum Reallocation Report" of the Department of Commerce, indicates that the 2402-2417 MHz band may be suitable for only certain types of modulation due to the operation of microwave ovens within the 2400-2500 MHz band. For example, a number of utilities and pipelines currently operate unlicensed Part 15 spread spectrum systems in this band.

The 2402-2417 MHz band might provide suitable spectrum for certain private communications systems which are able to use spread spectrum modulation or which could otherwise tolerate potential interference from the operation of microwave ovens. However, UTC is concerned that the limitations would be

inconsistent with communications systems intended to be used in and around the residential environment (such as utility mobile meter reading and demand side management) or for critical applications where interference could not be tolerated. UTC intends to provide additional input after reviewing the other comments submitted in response to this Inquiry, particularly from equipment manufacturers, to assist it in determining whether equipment could be developed for the 2402-2417 MHz band which would meet utility reliability and safety concerns.

As with the 2402-2417 MHz band, the restrictions proposed by the Department of Commerce for the 2390-2400 MHz band would not impose a significant limitation on the utility of this spectrum for private communications systems.

For utility purposes, 3 GHz is the upper limit for private emerging technology applications currently being considered. Accordingly, UTC expresses no opinion on the prospective use of the 4660-4685 MHz band.

IV. THE FCC SHOULD REDESIGNATE SOME PORTION OF THE SPECTRUM RESERVE FOR PRIVATE EMERGING TECHNOLOGIES

Given the pressing need for utility access to private communications spectrum, UTC is pleased that the Commission has included for consideration in this docket COPE's Petition for Rule Making, as the initial transfer of Federal spectrum would at least partially meet the requirements described by COPE.

However, in acting on COPE's petition UTC urges the Commission to recognize that even a reallocation of the bands proposed in the NOI would fall far short of the total spectrum requirements identified by COPE.

In light of this spectrum short-fall, and the FCC's recent decision[2/] modifying the spectrum allocations for PCS, UTC urges the Commission to consider COPE's petition in the context of the remaining Emerging Technologies spectrum in the 2110-2150 and 2160-2200 MHz bands as a supplement to the spectrum to be reallocated from the Federal government. An allocation of 2 GHz spectrum for private emerging technologies would be consistent with the FCC's original proposal to create a "spectrum reserve" in the 2 GHz band for the introduction of "emerging technologies" (emphasis added).[3/]

In making a proper analysis of its Communications Act obligations, the Commission should allocate a portion of the remaining 2 GHz spectrum reserve for the development of private emerging technologies. Such an allocation will fulfill the FCC's mandate to ensure the safety of life and property, and will enhance the competitive capabilities of the nation's core industries.

[2/] Memorandum Opinion and Order in GEN Docket No. 90-314, FCC 94-144, released June 13, 1994.

[3/] Notice of Proposed Rulemaking (NPRM), in ET Docket No. 92-9, 7 FCC Rcd 1542, 1543 (1992).

V. CONCLUSION

In making a proper analysis of its Communications Act obligations, the Commission should allocate a portion of the initial Federal spectrum reallocation for the development of private emerging technologies. Such an allocation will fulfill the FCC's mandate to ensure the safety of life and property, and will enhance the competitive capabilities of the nation's core industries. In addition, the FCC should consider making remaining portions of the Emerging Technologies band at 2110-2150 MHz and 2160-2200 MHz available for private emerging technologies.

WHEREFORE, THE PREMISES CONSIDERED, the Utilities Telecommunications Council respectfully requests the Commission to take actions consistent with the views expressed herein.

Respectfully submitted,

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